

On the Philippine species of Cypariini and Scaphidiini (Coleoptera: Staphylinidae: Scaphidiinae)

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On the Philippine species of Cypariini and Scaphidiini (Coleoptera: Staphylinidae: Scaphidiinae). - The Philippine species of Cypariini and Scaphidiini are reviewed. The Cypariini are represented by a single species, *Cyparium punctatum* Pic, the Scaphidiini by 13 species of *Scaphidium*, with five species described as new: *S. crassipes*, *S. flavicorne*, *S. ilanum*, *S. kurozawai*, and *S. rufofemorale*. The previously described species of *Scaphidium* are redescribed, and a key to the species is given.

Keywords: Coleoptera - Staphylinidae - Scaphidiinae - Philippines - systematics.

INTRODUCTION

The present article describes the previously published and new species of Philippine Cypariini and Scaphidiini. While only a single Cypariini species, *Cyparium punctatum* Pic, remains known from the Philippines, five new Scaphidiini species are described, all belonging to *Scaphidium* Olivier. The number of Philippine species of *Scaphidium* is hereby raised to thirteen. With the exception *S. tuberculipes* (Löbl) none of the previously published species was described with illustrations showing their diagnostic sexual characters. Such characters are illustrated here for the first time.

For purpose of the stability of nomenclature, lectotypes are designated for *S. badium* Heller, *S. luzonicum* Pic, *S. negrito* Heller, and *S. seriatum* Heller, each represented in the examined collections by a single syntype. Additional, unknown syntypes may exist in other collections and if, they may belong to other species than the specimens studied here.

One of the treated species is left is unmanned. It is similar to *S. philippense* Reitter and probably new. As long the type material of the latter remains unavailable for study, it is difficult to assert which one of the two species is the true *S. philippense*.

MATERIAL

The material is housed in the following collections:

FMNH Field Museum of Natural History, Chicago

MHNG Muséum d'histoire naturelle, Genève

MNHN Muséum National d'Histoire Naturelle, Paris

NHML The Natural History Museum, London
 SMNS Staatliches Museum für Naturkunde, Stuttgart
 SMTD Staatliches Museum für Tierkunde, Dresden
 ZMB Zoologisches Museum, Berlin

Note: I have seen the relevant type material of Philippine scaphidiines preserved in MNHN many years ago. It became unavailable for re-examination, as consequence of the present situation in the Coleoptera department of that museum.

Other abbreviations:

TL = total length, including head and extruded part of abdomen; BL = body length, from middle of anterior pronotal margin to inner apical angles of elytra.

TAXONOMY

Cypariini Achard, 1924

Cyparium Erichson, 1845

Cyparium is pantropical in distribution, with a few species extending into temperate Asia, south of North America, South Africa, and New Zealand. A single species is known from the Philippines.

Cyparium punctatum Pic, 1916

Cyparium punctatum Pic, 1916: 18

Type material. Syntype from East Malaysia "Ile Banguye" (Island Banggi) (MNHN) (see Note under Material).

Additional material examined. Mindanao: 30 km NW of Maramag, Bagongsilang, 1700m, 13-17.May 1996, Bolm. 16 (SMNS, MHNG); Leyte: Visca N Baybay, 200-500m, prim. forest, 22.2.91, W. Schawaller, 2 (SMNS, MHNG); Palawan, Matalangao Fall nr. Roxas, 100m, 28.VII.1985, M. Sakai, 1 (MHNG).

Description. Length 2.9-3.4 mm (TL), 2.3-2.8 mm (BL). Body moderately elongate. Head, body and femora uniformly reddish-brown, antennal segment 1 to 6, tibiae and tarsi light ochreous, antennomeres 7 to 10 and usually basal part of segment 11 darkened, dark brown to almost blackish, apical part of antennal segment 11 light brown to yellowish, in some specimens entire segment 11 distinctly lighter than segment 10.

Head at narrowest interval between eyes 0.25-0.30 mm. Clypeus in same plan as frons, frontal ridges absent. Antennal segment 3 slightly longer than segment 4, about 1.3 times as long as segment 5 and 1.6 times as long as segment 5, segment 7 slightly longer than wide (without basal stalk), following 3 segments subequal in length, slightly shorter than segment 7, becoming gradually wide, segment 10 about twice as wide as long (without stalk).

Pronotum with lateral margins arcuate, lateral and anterior marginal striae exposed, except at and near anterior angles, punctation fine and dense, with several distinctly larger punctures near basal lobe sometimes arranged to form irregular arc. Prosternal and hypomerall microsculpture absent, punctation hardly visible. Prosternum short, shorter than procoxae, median process and posterior prosternal edge carinate. Exposed portion of scutellum flat, about as long as wide at base.

Elytra moderately elongate, distinctly narrowed apically, shorter than combined width, sutural striae shallow, not extending along basal margins, adsutural areas flat, impunctate. Each elytron with 6 irregular, discal puncture rows, two inner puncture rows shortened toward base, third puncture row extending to or almost to basal puncture row, outer puncture rows shortened, sixth row in some specimens rather indistinct. Punctuation between puncture rows and near base reduced, punctuation near apices coarse. Metathoracic wing fully developed.

Metasternum with metacoxal process flat, concave at apical margin and with prominent, acute angles. Abdominal segments with very fine, punctulate micro-sculpture. Tergites 7 and 8 with even, fine punctuation, ventrites 1 to 3 each with pair of semi-erect setae, ventrite 4 with two pairs of semi-erect setae. Protibiae straight, meso and metatibiae slightly curved. Longest protibial spine as 7/10 protibial width at level of spine.

Male. Protarsal segments 1 to 3 weakly, almost equally enlarged, with ventral tenant setae. Aedeagus 0.85-1.0 mm long, with apical process strongly inflexed, acute at tip, internal sac lacking sclerotized pieces, parameres in lateral view evenly wide, hardly curved or sinuate, in dorsal view arcuate.

Distribution: Philippines: Mindanao, Leyte, Palawan; East Malaysia: Island Banggi.

Comments. *Cyparium punctatum* is very agile and flies away by minor derangement (personal observation near St. Rafael, Palawan, specimen not collected).

Scaphidiini Latreille, 1807

Scaphidium Olivier, 1795

The genus is species rich and widely distributed throughout the tropics and temperate regions, with notable absence from south of South America and New Zealand. Only seven species were to date known from the Philippines (Löbl, 1972, 1997). With the five additional ones described below their number appears still low compared to the highly diverse southeast Asian fauna of *Scaphidium*. The genus is inadequately studied and consequently a large number of species can be reliably identified only if compared to primary type material. The relationships within the genus have not yet been examined.

Nine of the Philippine species, *S. crassipes* sp. n., *S. flavicorne* sp. n., *S. ilanum* sp. n., *S. kurozawa* sp. n., *S. negrito* Heller, *S. cf. philippense* Reitter, *S. sp.* close to *philippense*, *S. rufofemorale* sp. n., and *S. thomasi* (Pic) share shortened mesocoxal lines, ventral side of male femora flattened, concave and conspicuously pubescent, aedeagus robust, with short, impressed apical valves and Y-shaped sclerite of the internal sac joined basally to a transverse sclerite. The first two character states are probably synapomorphies defining a species group that appears to be restricted to the Philippines.

Key to the Philippine species of *Scaphidium*

- 1 Pronotum and elytra uniformly coloured 2
- Pronotum and/or elytra bicoloured 7
- 2 Elytral disc with distinct, longitudinal puncture rows. Small species,
body length 2.7 mm, body uniformly ochreous *S. seriatum* Heller
- Elytral disc lacking puncture rows 3

- 3 Antennal club entirely yellowish or light brown. Large species, body length 4.0-4.8 mm *S. flavicorne* sp. n.
 - Antennal club entirely or to large extend black or very dark. Moderately large to small species, body length usually clearly less than 4 mm, not exceeding 4.1 mm 4
- 4 Body uniformly ochreous, apices of femora and tibiae darkened. Pronotum with lateral impunctate *S. badium* Heller
 - Body, femora and tibiae uniformly black or blackish-brown. Pronotum with lateral and anterior striae punctate 5
- 5 Pronotum with median puncture row short, touching antebasal puncture row. Hypomera conspicuously microsculptured *S. negrito* Heller
 - Pronotum lacking median puncture row. Hypomera lacking microsculpture 6
- 6 Punctuation on pronotal disc coarser than that on elytral disc. Femora much lighter than tibiae. Male protibiae gradually widened apically *S. rufofemorale* sp. n.
 - Punctuation on pronotal and elytral disc similar, very fine. Femora not, or slightly lighter than tibiae. Male protibiae evenly wide in apical halves *S. ilanum* sp. n.
- 7 Elytra very dark reddish-brown to black, each with light basal and apical transverse fasciae reaching to suture and lateral margins 8
 - Elytra reddish-brown, each with dark, isolated central spot, or dark lateral area. If dark lateral area extended on to disc, it never reaches up to suture 10
- 8 Pronotum uniformly black 9
 - Pronotum bicolorous, black or very dark brown in middle and at base, reddish laterally. Male protibiae sinuate *S. thomasi* (Pic)
- 9 Elytra with basal reddish fasciae large, about twice as long as apical fascia, reaching or almost reaching elytral mid-length. Male protibiae straight, widest at apex. Apical valves of aedeagus without or with minute mesal lamellae *S. cf. philippense* Reitter
 - Elytral with basal fasciae short, about 1.5 times as long as apical fascia, reaching middle third of elytral length. Male protibiae weakly sinuate, widest in middle. Apical valves of aedeagus with distinct mesal lamellae *S. sp. nr. philippense* Reitter
- 10 Elytra black on adsutural areas, along base, and on lateral margins including epipleura and supra-epipleura, each with black medio-lateral spot. Most of elytral surface reddish or ochreous. Ventral side of male profemora and protibiae finely tuberculate *S. tuberculipes* (Löbl)
 - Colour pattern different. Male profemora and protibiae not tuberculate 11
- 11 Elytra with isolated, black, discal spot and black along apices. Male protibiae sinuate or almost straight 12
 - Elytra with dark, transverse, central fascia extending from darkened sutural striae to outer fifth of elytral width. Pronotum with dark median spot narrowed and deeply notched anteriorly. Male protibiae arcuate *S. luzonicum* (Achard)

- 12 Pronotum dark reddish, with black base and black median fascia. Elytra with small, black, humeral spot and black along apical margins. Male protibiae distinctly sinuate *S. kurosawai* sp. n.
- Pronotum uniformly reddish-brown. Elytra lacking humeral spot, not darkened along apices. Male protibiae weakly sinuate *S. crassipes* sp. n.

***Scaphidium badium* Heller**

Figs 1-2

Scaphidium badium Heller, 1917: 43.

Type material examined. Syntype ♀, with following original labels: “Mt. Makiling, Luzon, Baker /2145/ badium typus (red) /1916 / Staatl. Museum für Tierkunde. Dresden” (SMTD). It is here designated as lectotype and appropriately labelled.

Additional material examined. Luzon, Lagunas, Mt. Makiling, 400m, 19.XI.1995 and Mt. Makiling, ca 600m, 28.XI.1995, I. Löbl, 1 ♂, 1 ♀ (MHNG).

Description. Length 4.5-5.0 mm (TL) and 3.8-4.1 mm (BL). Body convex, not particularly elongate. Head and body uniformly ochreous. Antennal segments 1 to 6 as body or slightly lighter, segments 7 to 10 black, segment 11 black with light apex. Coxae, femora, femoral apices excepted, and tarsi as body or slightly lighter than body. Femoral apices and tibiae darkened, dark brown to blackish.

Head at narrowest interval between eyes 0.10-0.11 mm, punctation very fine, punctures beyond eye line larger than most other punctures. Antennal segments 3 and 4 weakly thickened apically, segments 5 and 6 distinctly thickened apically, segment 4 slightly longer than segment 3, almost twice as long as segment 2, segment 5 about as long as segment 2 and almost 1.5 times as long as segment 6; club segments flattened, segment 7 subtriangular, shorter than segment 3, about as long as segments 9 and 10, segment 11 elongate-oval, longer than segment 10.

Pronotum swollen dorsally, in middle above plane of elytra, fairly strongly inclined and narrowed anteriorly, lateral margins clearly sinuate, concave in antebasal area, lateral margin carinae exposed in basal halves, concealed in anterior halves in dorsal view, lateral margin striae impunctate, anterior margin stria very finely punctate, antebasal puncture row dense, coarse, not impressed and not interrupted in middle, extended close to lateral margins, forming broad-concave line, disc lacking microsculpture, discal punctation even, very fine, consisting of very shallow, not clearly delimited punctures, punctures much smaller than puncture intervals. Exposed part of scutellum flat, slightly wider than long.

Elytra distinctly narrowed basally and apically, with lateral contours evenly rounded, lateral margin carinae throughout visible in dorsal view, apical margins with fine serration, sutural striae deep, very finely punctate, adsutural areas very weakly roof-like elevated, with extremely fine puncture rows, basal punctures sparse, joined by striae, consisting of punctures about as large as or slightly smaller than pronotal antebasal punctures, discal punctation similar to pronotal punctation, longitudinal puncture rows absent.

Prosternum lacking median ridge, finely punctate along anterior edge, lacking microsculpture. Hypomera impunctate, not microsculptured. Margin of mesosternum between mesocoxae transverse. Mesosternum with carinae transverse laterally, curved anteriorly and approximate to meet median mesosternal ridge. Mesosternal ridge low,

gradually elevated, not sulcate. Metasternum with mesocoxal lines extended along anterior margin and joined. Mesocoxal lines with few fairly coarse punctures beyond coxae. Metasternum lacking microsculpture, sparsely and very finely punctate, except for medio-apical surface in males. Legs long, tibiae striate.

Abdomen very finely punctate and with punctulate microsculpture.

Male. Posterior two thirds of middle part of metasternum strongly impressed, coarsely punctate. Intercoxal process prominent, truncate. Metasternal setose patch extended up to anterior third of metasternum, consisting of fairly short setae in middle and very long curled setae on lateral edges of patch. Femora lacking obvious sexual characters. Tibiae lacking rows of long, fine setae. Protibiae about as long as femora, weakly arcuate, almost even, slightly widened at apex. Protarsi not widened, lacking ventral tenant or long setae, about as long as four tenth of protibiae. Mesotibiae and metatibiae weakly arcuate and as thick as protibiae, distinctly longer than protibiae. Mesotarsi long, about as long as two thirds of mesotibiae, longer than metatarsi. Aedeagus (Figs 1, 2) 1.15 mm long.

Distribution. Luzon.

Comments. This species is characterized by the colour pattern of its legs, the long tibiae and strongly impressed male metasternum. Its genital characters are very distinct from those in other Philippine species.

***Scaphidium crassipes* sp. n.**

Figs 3-4

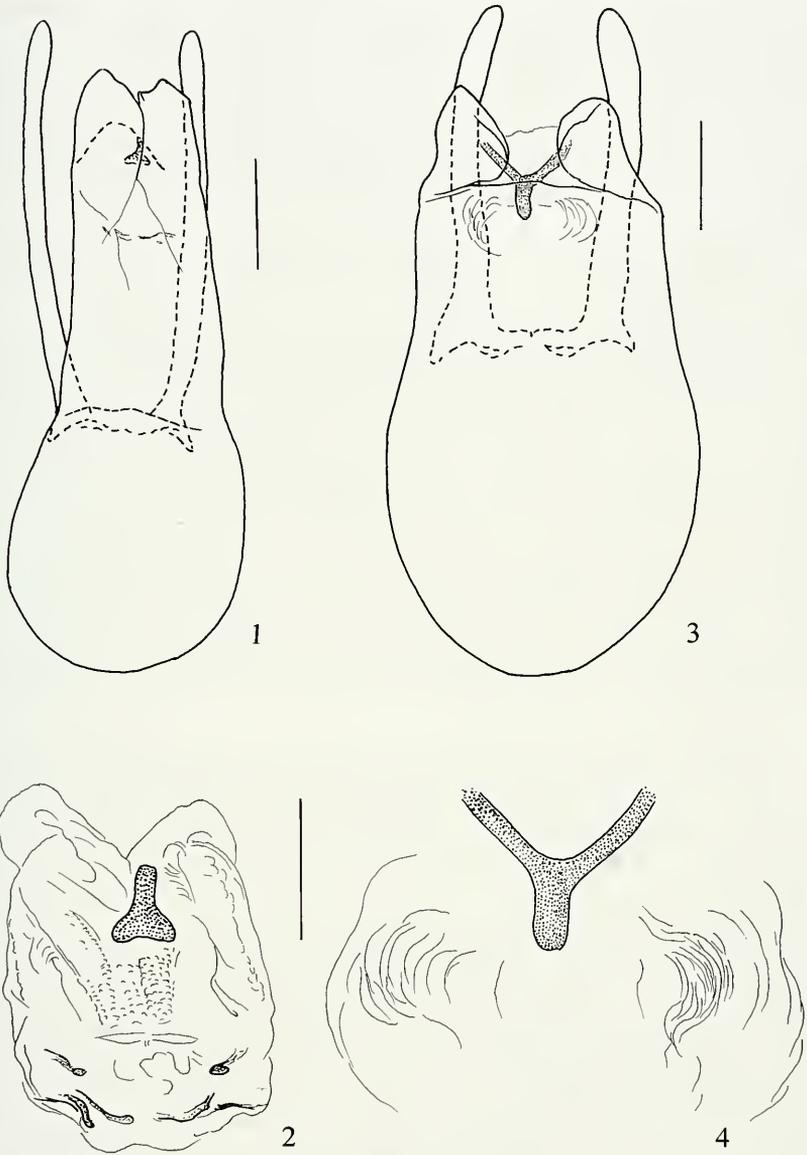
Holotype ♂: Mindanao, Todaya, 29.VII. 1970, M. Satô (MHNG).

Description. Length 4.8 mm (TL), 3.75 mm (BL) mm. Head, ventral side of body and most of elytra uniformly reddish-brown. Pronotum reddish-brown, slightly darker than head. Elytra with fairly large, not clearly delimited, dark central spot. Apical abdominal tergites light reddish-brown. Antennal segments 1 to 5 and 11 light, ochreous, segments 6 to 10 black. Femora and tibiae as head, tarsi hardly lighter.

Head densely and very finely punctate, narrowest interval between eyes 0.12 mm. Antennae with segments 3 and 4 equally long and wide, segment 5 shorter and wider than segment 4, segment 6 subtriangular, widened apically, wider than segment 5, about as long as three fourth of segment 4, segment 7 subtriangular, slightly longer than wide (without basal stalk), segment 8 about as wide as and distinctly shorter than segment 7, segments 9 and 10 larger than segment 8, segment 11 oval, longer than segment 10.

Pronotum not swollen dorsally, gradually inclined and fairly narrowed anteriorly, lateral contours almost oblique, lateral margin carinae exposed throughout in dorsal view, lateral margin striae sparsely punctate, anterior margin striae densely, finely punctate, disc lacking microsculpture, antebasal puncture row arcuate, not impressed, fairly coarse, dense, becoming sparser laterally, not interrupted in middle, median puncture row absent, discal punctation fine and dense, consisting of well delimited punctures. Exposed part of scutellum flat, wider than long.

Elytra weakly narrowed basally and apically, with lateral contours oblique in middle, weakly rounded in anterior and posterior thirds, lateral margin carinae entirely visible in dorsal view, sutural striae deep, very finely punctate, adsutural areas flat, extremely finely punctate, basal puncture row consisting of moderately coarse punc-



FIGS 1 to 4. 1 and 2, *S. Scaphidium badium* Heller, aedeagus (1), scale bar = 0.2 mm, internal sac (2), scale bar 0.1 mm; 3 and 4, *S. crassipes* sp. n., aedeagus (3), scale bar = 0.2 mm, internal sac (4), scale bar = 0.1 mm.

tures extending almost up to humeral area, apical margins finely serrate. Discal punctation dense and fine, finer than pronotal punctation, longitudinal puncture rows absent.

Prosternum slightly swollen in middle, lacking median ridge, with microsculpture punctulate and distinct anteriorly, becoming obsolete toward coxae, puncture row

along anterior edge not interrupted in middle, coarse. Hypomera extremely finely punctate, lacking microsculpture. Mesepisterna with punctulate microsculpture. Mesosternal carinae arcuate, curved mesally and parallel on median ridge, joined at tip of median ridge. Median ridge robust, high, parallel-sided. Posterior margin of mesosternum arcuate. Mesocoxal lines shortened, ending far beyond meta-mesosternal suture, coarsely punctate. Metasternum lacking microsculpture, extremely finely punctate laterally. Legs long, protibiae and mesotibiae finely carinate, metatibiae not carinate.

Abdomen with distinct punctulate microsculpture except on middle part of sternite 1.

Male. Metasternum not swollen medio-anteriorly, with median impression extended to line of mesocoxal apices, lacking apical process, apical margin truncate. Setose patch covering posterior half of metasternum, setae long, curled at apices, very long and oblique near metacoxal margins, punctuation coarse. Profemora curved, with ventral side flattened, concave and bearing dense, short pubescence. Protibiae weakly sinuate, appearing almost straight, gradually thickened apically, with short pubescence on mesal side. Protarsi slightly longer than half of protibiae, with segments 1 to 3 weakly widened, segments 3 and 4 with long ventral setae, tenant setae absent. Mesotibiae slightly longer than protibiae, slightly arcuate, slightly thickened apically, at apices narrower than protibiae, with mesal pubescence dense, robust, extended from apices to basal fifth. Mesotarsi about as long as two thirds of mesotibiae. Metatibiae not thickened apically, weakly arcuate, hardly longer than mesotibiae. Aedeagus (Figs 3, 4) 1.2 mm long.

Distribution. Mindanao.

Comments. This species is unique among the Philippine congeners in having its body reddish with exception of the dark elytra spot. It may be distinguished from the comparatively similar *S. badium* by the robust legs and male tibial characters. The aedeagi of both species are distinctive.

***Scaphidium flavicorne* sp. n.**

Figs 5-7

Holotype ♂: Mindanao, 30 km NW of Maramag, Bagong Silang, 1700m, 13-17.V.1996, Bolm (SMNS).

Paratypes: with same data as holotype, 1 ♀ (MHNG); Mindanao, Todaya, 29.VII.1970, M. Satô, 2 ♂ (MHNG); Mindanao, Mumungan [hand-written and not clearly readable], 1 ♂ (ZMB); Luzon, Ifugao Prov., Mt. Pollis, 1900m, 4-5 VI. 1977, M. Satô, 1 ♀ (MHNG).

Description. Length 5.0-5.5 mm (TL), 4.0-4.8 mm (BL). Body fairly convex. Head and body uniformly ochreous. Antennae much lighter than body, yellowish to light brown. Femora and tibiae dark reddish-brown to black, if dark reddish-brown tibiae darker than femora. Tarsi much lighter than tibiae, about as light as antennae.

Head with frons uniformly, very finely punctate, narrowest interval between eyes 0.20-0.26 mm. Antennae with segment 4 distinctly longer than segment 3 and as wide as latter, segment 5 slightly shorter and about 1.4 times as wide as segment 4, segment 6 triangular, almost twice as wide as segment 4, segments 7 to 10 subequal, slightly widened apically, segments 7, 9 and 10 about as long as wide, segment 8 slightly shorter than segment 7, segment 11 oval, slightly elongate, as wide as and longer than segment 10.

Pronotum not swollen dorsally, gradually inclined and fairly narrowed anteriorly, lateral contours straight or very weakly concave in basal two thirds, rounded near anterior angles, lateral margin carinae exposed throughout in dorsal view, lateral margin striae irregularly punctate, anterior margin stria very finely and densely punctate, disc lacking microsculpture, antebasal puncture row not impressed, not or shortly interrupted in middle, moderately coarse, bisinuate, not becoming sparser laterally, median puncture row absent, discal punctation dense and fine, distinct at low magnification, consisting of punctures much smaller than puncture intervals. Exposed part of scutellum convex, slightly longer than wide.

Elytra distinctly narrowed basally and apically, with lateral contours rounded, lateral margin carinae entirely visible in dorsal view, sutural striae deep, very finely punctate, adsutural areas weakly roof-like, extremely finely punctate, basal puncture row consisting of moderately coarse punctures extending up to humeral area, apical margins finely serrate. Discal punctation sparser and mostly still finer than pronotal punctation, longitudinal puncture rows absent.

Prosternum flat in middle, lacking median ridge, punctures along anterior margin large, not clearly delimited, elongate. Prosternal microsculpture forming brick-wall pattern. Hypomera lacking microsculpture, very finely punctate. Mesosternal margin between coxae arcuate. Mesosternal carinae transverse laterally, arcuate and gradually approximate anteriorly, extended on to median ridge. Median ridge long, fairly narrow, shallowly sulcate. Mesocoxal lines shortened, ending far beyond mesosternum, with comparatively small marginal punctures. Metasternum lacking microsculpture. Legs long, tibiae carinate.

Exposed abdominal segments very finely punctate and with punctulate microsculpture.

Male. Medio-apical part of metasternum impressed. Metasternal process prominent, setose patch covering entire apical third and extended slightly anterior apical third of metasternum, with marginal setae long and curled, most setae recumbent, fairly short. Profemora with ventral side concave, flattened and wide, densely pubescent. Protibiae sinuate, gradually, weakly thickened from base toward mid-length, with flattened outer and inner sides, outer edge expanded near apex to form subapical carina (Fig. 5), apical half of inner side with short, oblique setae. Protarsi about as long as half of protibiae, weakly widened, segments 1 and 2 with short tenant setae, segments 3 and 4 with apical tuft of long setae. Mesotibiae about as long as protibiae, weakly arcuate, thickened from base to middle third, in apical two thirds evenly thick, with oblique setae on inner side dense, extended from apex almost up to basal fourth. Metatibiae similar to mesotibiae, slightly thicker and with oblique, less dense setae. Mesotarsi and metatarsi slightly longer than half of respective tibiae. Aedeagus (Figs 6, 7) 1.6 mm long.

Distribution. Mindanao and Luzon.

Comments. This species is unique in having uniformly light antennae, and by the shape of the antennomeres 5 and 6. It is also characterized by the strongly sinuate male protibiae. The male characters suggest relationship to *S. crassipes*.

Scaphidium ilanum sp. n.

Figs 8-9

Holotype ♂: Socorro, 12. X. 1915, Böttcher (ZMB).

Description. Length 4 mm (TL), 3.2 mm (BL). Body comparatively convex. Head and body black, antennae with segments 1 to 6 dark reddish-brown, segments 7 to 10 black, segment 11 black with slightly lighter apical area. Femora reddish, tibiae and tarsi blackish-brown with reddish shine.

Head very finely punctate. Narrowest interval between eyes 0.10 mm. Antennal segments 3 to 5 equally long, segment 5 slightly thicker than segments 4 and 3, segment 6 slightly shorter and thicker than segment 5, segment 7 subtriangular, slightly longer than wide, about as long as segment 3, segment 8 shorter and narrower than segment 7, segments 9 and 10 similar in size, gradually widened apically, about as long as and wider than segment 7, segment 11 suboval, slightly longer than wide.

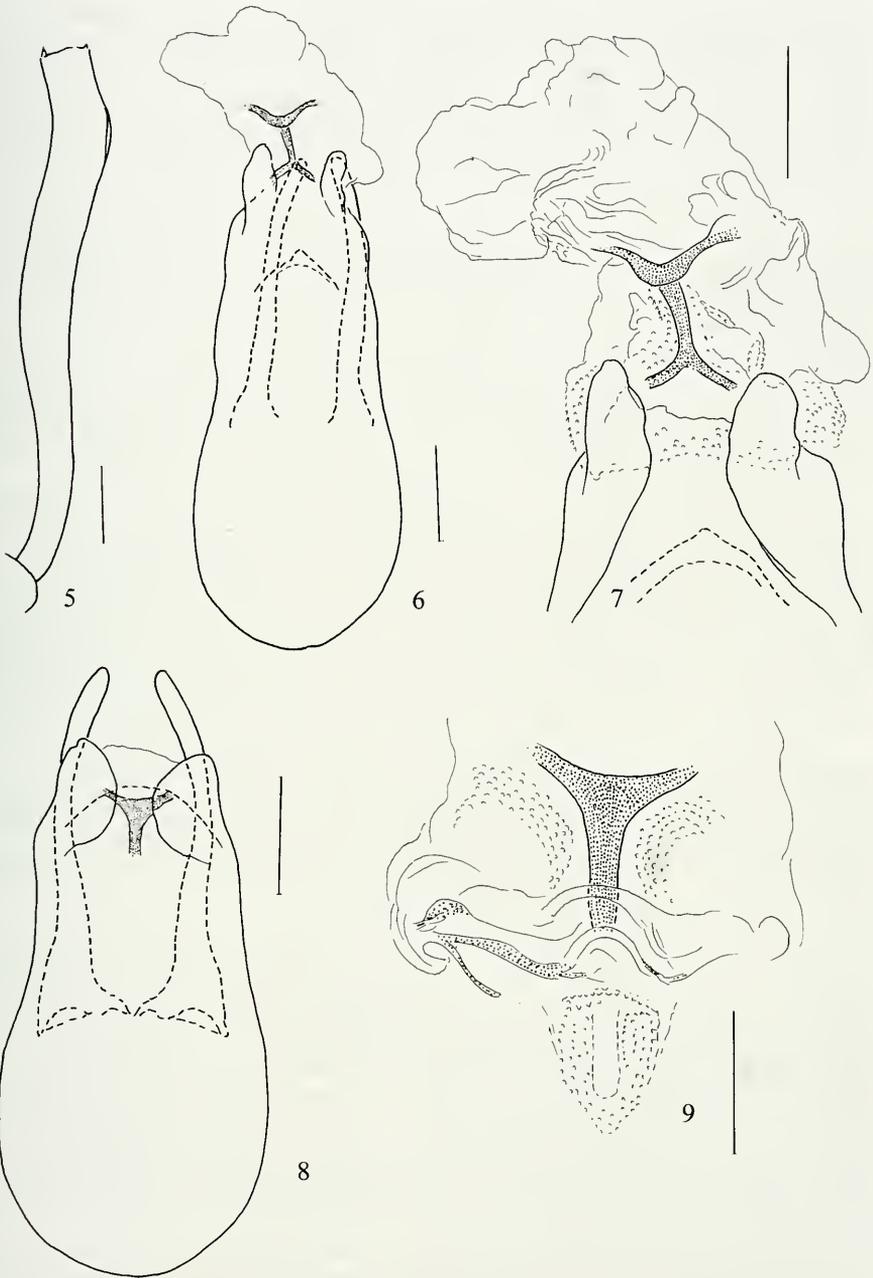
Pronotum not swollen dorsally, with central part of disc slightly above plan of elytral base, disc gradually inclined and narrowed anteriorly, lateral contours weakly emarginate in basal half, convexly rounded in anterior half, lateral margin carinae distinct in basal half and concealed in apical third in dorsal view, lateral margin striae each with two coarse antebasal punctures, anterior margin stria impunctate in middle, densely, distinctly punctate laterally, disc lacking microsculpture, antebasal puncture row hardly impressed, shortly interrupted in middle, arcuate, approximate to lateral margin, consisting of coarse punctures, outer one or two punctures approximate toward base. Discal punctation fairly dense and fine, distinct at low magnification, punctures much smaller than puncture intervals. Exposed part of scutellum flat, hardly wider than long.

Elytra weakly narrowed basally, fairly narrowed apically, with lateral contours rounded, lateral margin carinae throughout visible in dorsal view, sutural striae deep, very finely punctate, adsutural areas almost flat, finely punctate, basal puncture row consisting of coarse punctures extending onto humeral area, apical margins lacking serration. Discal punctation very fine, finer than that on pronotum, longitudinal puncture rows absent.

Prosternum with low median ridge, large punctures present along entire anterior margin, microsculpture forming very short striae and waves. Hypomera impunctate, lacking microsculpture. Margin of mesosternum between mesocoxae arcuate. Mesosternal carinae oblique, joined on to base of median ridge. Mesosternal ridge robust, not sulcate. Mesepisterna lacking microsculpture. Metasternum with mesocoxal lines shortened, ending far beyond mesosternum, coarsely punctate. Metasternum lacking microsculpture, very finely punctate laterally. Abdominal tergites 7 and 8 and exposed sternites with even, very fine punctation. Legs fairly short. Tibiae carinate.

Exposed abdominal segments with punctulate microsculpture.

Male. Posterior two thirds of median part of metasternum moderately impressed, finely punctate, with setose patch. Metasternal process prominent, bilobed. Profemora with ventral side widened, flattened and concave, bearing dense pubescence. Protibiae straight, lacking long, erect setae, with mesal side becoming thicker from base to middle third, widest shortly beyond basal third, from widest point very weakly narrowed apically in ventral view, widened and flattened in apical sixth in mesal view. Protarsi about as long as half of protibiae, with tarsomeres 1 to 3 widened



FIGS 5 to 9. 5, *Scaphidium flavicorne* sp. n., contours of male protibia, scale bar = .3 mm; 6 and 7, *S. flavicorne* sp. n., aedeagus (6), scale bar = 0.3 mm, apex of median lobe with extruded internal sac (7), scale bar = 0.2 mm; 8 and 9, *S. ilanum* sp. n., aedeagus (8), scale bar = 0.2 mm, internal sac (9), scale bar = 0.1 mm.

and bearing tenant setae, tarsomeres 3 and 4 with long ventral setae. Mesotibiae hardly longer than protibiae, about 1.5 times as long as mesotarsi, almost evenly thick and weakly arcuate, slightly narrowed toward base, with oblique mesal setae inconspicuous, extended from apex up to basal fifth. Metatibiae slightly longer than mesotibiae, almost twice as long as metatarsi, almost straight, slightly narrowed toward base. Aedeagus (Figs 8, 9) 1.05 mm long.

Distribution. Lucas Is.

Comments. This species resembles *S. negrito* by the uniformly dark body. It differs conspicuously by the reddish femora, emarginate lateral margins of pronotum and very fine elytral punctation. The metasternal pubescence is strongly damaged in the examined specimen.

***Scaphidium kurosawai* sp. n.**

Figs 10-11

Holotype ♂: Luzon, Ifugao Prov., Mt. Polis, 1900m, 5.V.1977, Y. Kurosawa (MHNG).

Paratypes: ♀, with same data as holotype (MHNG); ♂, Luzon, Balbalan, III. 1918, G. Böttcher (ZMB).

Description. Length 3.8-4.0 mm (BL), 4.5-5.5 mm (TL). Body comparatively convex. Head very dark reddish or black. Pronotum with black base, black median fascia and narrowly black along entire anterior and lateral edges. Large lateral parts of pronotum and upper parts of hypomera reddish. Elytra narrowly black along basal and apical edges, basal black fascia extended on to humeral areas to form small spots. Elytral disc with large, irregularly oval, black spot, adsutural areas reddish-brown, remaining surface ochreous. Venter of body black. Antennal segments 1 to 6 and legs reddish-brown, antennal segment 7 to 10 black, segment 11 ochreous.

Head punctation fine, irregular. Narrowest interval between eyes 0.12-0.13 mm wide. Antennal segments 3 and 4 equally long and thick, segment 5 slightly shorter and thicker than segment 4, segment 6 distinctly shorter and thicker than segment 5, segment 7 gradually widened apically, slightly longer than wide, segment 8 about as long as wide, segments 9 and 10 weakly widened apically, about as long as wide, slightly larger than segment 7, segment 11 elongate-oval.

Pronotum not swollen dorsally, with central part of disc hardly above plan of elytral base, disc gradually inclined and narrowed anteriorly, lateral contours slightly rounded to oblique in basal half, convexly rounded in anterior half, lateral margin carinae throughout distinct in dorsal view, lateral margin striae very sparsely and very finely punctate, anterior margin stria throughout densely and finely punctate, disc lacking microsculpture, antebasal puncture row not or hardly impressed, very shortly interrupted in middle, arcuate, approximate to lateral margins, consisting of coarse punctures, few outer punctures approximate toward base. Discal punctation fairly sparse and fine, irregular, visible at low magnification. Exposed part of scutellum slightly convex, as wide as long.

Elytra narrowed basally and apically, with lateral contours rounded, lateral margin carinae throughout visible in dorsal view, sutural striae deep, very finely punctate, adsutural areas almost flat anteriorly, roof-like in apical two thirds, very finely punctate, basal puncture row consisting of coarse punctures extending on to humeral area, apical margins very finely serrate. Discal punctation very fine, much finer than that on pronotum, hardly visible on ochreous areas, longitudinal puncture rows absent.

Prosternum lacking microsculpture, flattened in middle and lacking median ridge, with anterior margin puncture row widely interrupted in middle, consisting of coarse and dense, not well delimited punctures. Hypomera lacking microsculpture, extremely finely punctate. Margin of mesosternal process arcuate. Mesosternal carinae oblique, curved anteriorly to meet on to median mesosternal ridge. Mesosternal ridge robust, parallel-sided, sulcate. Mesocoxal lines shortened, ending far beyond mesosternum, with few large marginal punctures. Metasternum lacking microsculpture. Legs long, tibiae carinate.

Abdominal sternites 1 to 4 lacking microsculpture, very finely punctate, apical abdominal segments with conspicuous punctulate microsculpture.

Male. Metasternum with large, deep medio-apical impression. Setose patch present on apical third on metasternum, consisting of recumbent, short setae, longer apical setae and bunches of very long, curled, erect setae near mesocoxae. Metasternal process prominent, hardly notched in middle. Profemora with ventral side flattened, concave, bearing dense, fairly long pubescence. Protibiae sinuate, widened from base toward middle, in apical halves almost evenly wide, at apices hardly widened, with short, dense pubescent on apical half of inner side. Protarsi about as long as half of protibiae, with segment 1 to 3 distinctly widened and bearing tenet setae, segments 3 to 5 with long ventral setae. Mesotibiae slightly longer than protibiae, slightly curved in apical halves, gradually, slightly thickened toward apices, flattened mesally, with dense, robust, mesal pubescence extended from apices to basal fourth. Mesotarsi slightly longer than halves of mesotibiae. Metatibiae and metatarsi about as mesotibiae and mesotarsi. Aedeagus (Figs 10, 11) 1.48 mm long.

Distribution. Luzon.

Comments. This species is similar to *S. philippense* and *S. thomasi*. It differs by the elytral spot, and from *S. philippense* by the bicolour pronotum. *S. kurozawai* may be distinguished from these two species also by the larger male metasternal process, the deeper metasternal impression, the metasternal setae much longer, the tibiae longer, and the mesotibiae and metatibiae gradually thickened apically.

Scaphidium luzonicum (Achard)

Figs 12-13

Scaphidiolum luzonicum Achard, 1924: 152.

Scaphidium luzonicum; Leschen & Löbl, 1995: 472.

Type material examined. Syntype ♂, bearing following original labels: "SYN-TYPE" (round, blue) / 476136 / Luzon / Semper / Phillip Island / Fry Coll.1905.100 / *Scaphidium luzonicum* J. Achard det. TYPE / *Scaphidium luzonicum* Achard R.J.W.Aldridge det. 1976 SYN-TYPE (NHML). It is here designated as lectotype and appropriately labelled.

Description. Length 3.7 mm (BL), 5.4 mm (TL). Body comparatively convex. Head, body and appendages ochreous, except for darkened pronotal and elytral areas. Pronotum with black macula, starting at and touching antebasal puncture row, becoming narrower anteriorly, extended almost up to anterior fifth of pronotum, and divided anteriorly to form two narrow branches separated by ochreous median fascia. Elytra each with central, dark brown fascia touching sutural stria and extending up to outer sixth of elytral disc (in dorsal view). Elytral fasciae almost twice as wide as long, extended narrowly along sutural striae toward and along base, with irregular, not clearly delimited margins, posterior margin situated about in sutural mid-length.

Length of dark elytral fasciae about as interval between them and basal margins, and about as two thirds of interval between them and apical margins. Adsutural areas and apices of femora slightly darker than prevailing body surface.

Head punctation very shallow and indistinct, in middle part of vertex, beyond eyes, more dense and consisting of larger punctures than punctation between eyes. Narrowest interval between eyes 0.14 mm. Antennal segment 4 slightly longer than segment 3 and about 1.5 longer than segment 5, segments 3 to 5 almost equally thick.

Pronotum swollen dorsally, with central part of disc above plan of elytra, disc gradually inclined and fairly narrowed anteriorly, lateral contours distinctly emarginated in basal halves, arcuate in anterior halves, lateral margin carinae visible in dorsal view, anterior and lateral margin striae impunctate, disc lacking microsculpture, antebasal puncture row impressed, not interrupted in middle, extended almost to lateral margins, hardly bisinuate, antebasal punctures moderately coarse, laterally sparser than in middle. Median puncture row absent. Discal punctation irregular, fairly dense and fine on dark macula, almost indistinct laterally. Exposed part of scutellum swollen, slightly longer than wide.

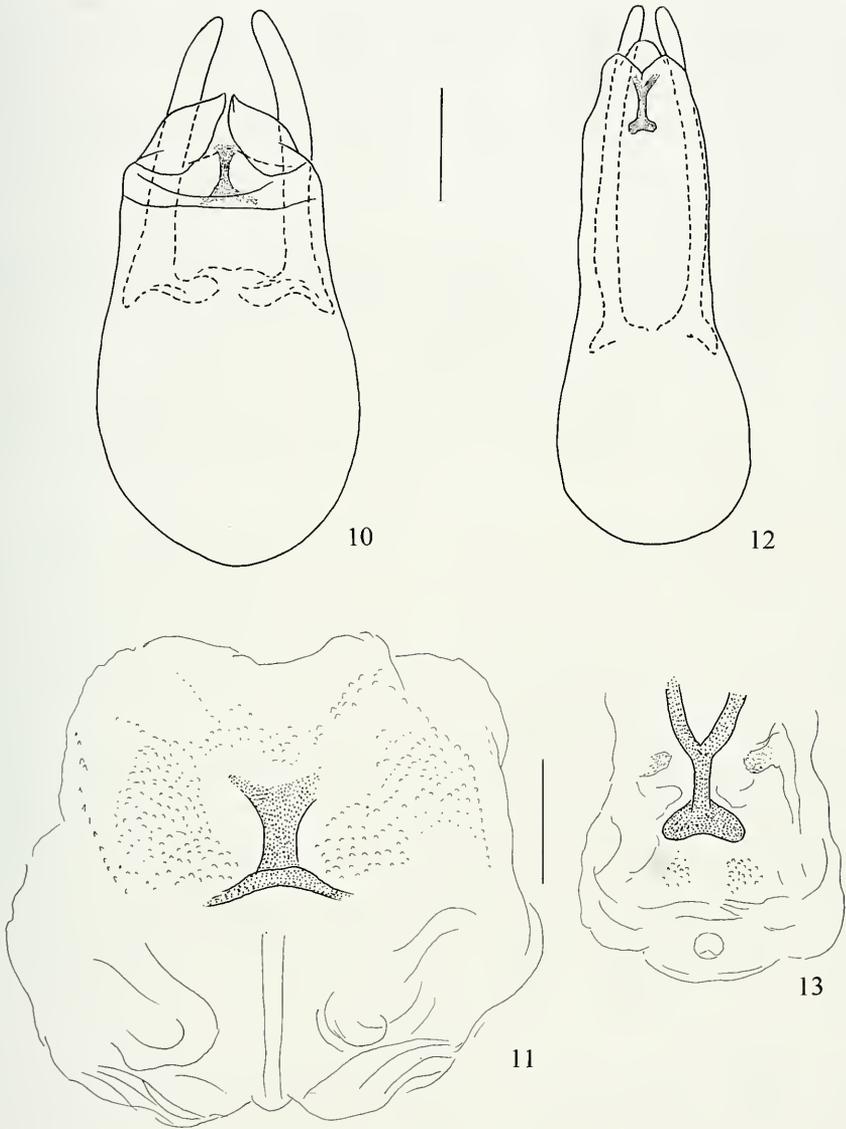
Elytra fairly narrowed basally and apically, with lateral contours rounded, lateral margin carinae entirely visible in dorsal view, sutural striae deep, finely punctate, adsutural areas roof-like, extremely finely punctate, basal puncture row consisting of comparatively fine punctures not extended on to humeral areas, apical margin serration present. Discal punctation irregular, dense and fine, similar to that on pronotal centre, longitudinal puncture rows absent.

Prosternum with low median ridge, large punctures along outer parts of anterior margin, central part of anterior margin impunctate, microsculpture hardly visible. Hypomera impunctate, lacking microsculpture. Mesosternal carinae almost transverse laterally, curved anteriorly and converging toward mid-line to form short triangle, joined on very low median ridge. Anterior part of median ridge not carinate and not sulcate. Margin of mesocoxal process transverse, truncate, in middle slightly more prominent than on sides. Metasternum with mesocoxal lines joined anteriorly, coarsely punctate along outer side of coxae. Metasternum lacking microsculpture, impunctate laterally. Legs long, tibiae carinate.

Abdominal sternites appearing impunctate, abdominal microsculpture punctulate, hardly visible on sternites 1 to 4, conspicuous on sternites 5 and 6.

Male. Metasternal process hardly prominent, truncate. Metasternal setose patch reaching almost up to anterior third of metasternum, consisting of recumbent, moderately long setae, and curled, very long latero-apical setal tufts. Medio-apical metasternal impression deep and large, impunctate in middle, coarsely punctate on sides. Femora long, narrow, lacking obvious sexual characters. Protibiae long and evenly narrow up to slightly thickened apex, slightly curved at base, almost straight toward apical third, in apical third distinctly curved. Protarsi about as long as third of protibiae, lacking tenant setae. Mesotibiae slightly longer than protibiae (7/6), gradually, very weakly thickened toward apex, with single, sparse setal row on mesal side. Metatibiae almost as long as mesotibiae, almost evenly narrow. Aedeagus (Figs 12, 13) 1.24 mm long.

Distribution. Luzon.



FIGS 10 to 13. 10 and 11, *Scaphidium kurozawai* sp. n., aedeagus (10), scale bar 0.3 mm, internal sac (11), scale bar = 0.1 mm; 12 and 13, *S. luzonicum* (Achard), aedeagus (12), scale bar = 0.3 mm, internal sac (13), scale bar = 0.1 mm.

Comments. This species may be easily distinguished from its Philippine congeners by the colour pattern. The sexual characters are similar to those in *S. badium* that has also the uninterrupted mesocoxal lines, long and narrow legs and elongate aedeagus.

The lectotype is the only available specimen and in poor condition: its prothorax is separated from the mesothorax, all left legs are missing, the right leg has only 2 basal tarsomeres, and the right metaleg lacks tarsi. Both antennae have only the 5 basal segments. In addition, the structures of the internal sac are not clearly visible in the slide and the respective illustration (Fig. 13) is therefore somewhat schematic.

***Scaphidium negrito* Heller**

Figs 14-15

Scaphidium negrito Heller, 1917: 42.

Type material examined. Syntype ♂, with following original labels: "P. Princesa Palawan Baker/1916 5/S. negrito typus. (red)/Staatl. Museum für Tierkunde. Dresden" (SMTD). It is here designated as lectotype and appropriately labelled.

Additional material examined. Palawan, Trident Mine, 500m, foot of Victoria Peak nr. Narra, 4. IX. 1985, M. Sakai, 1 ♂, 4 ♀ (MHNG).

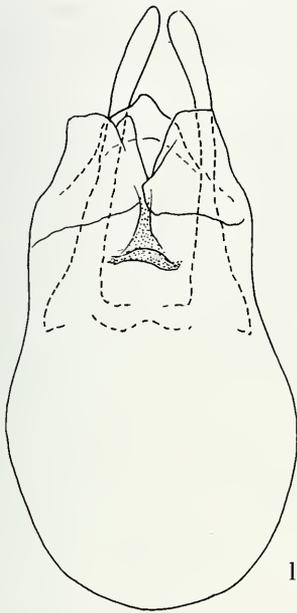
Description. Length 3.4-4.1 mm (TL) and 2.8-3.2 mm (BL). Body comparatively elongate, moderately convex. Head and body uniformly black. Antennal segments 1 to 6 dark brown, antennal club, apical segment included, black. Legs very dark brown to blackish.

Head punctation beyond eyes more distinct than that in middle of frons, at narrowest interval between eyes 0.12-0.15 mm. Antennal segments 3 and 4 subequal, segment 5 slightly shorter and hardly thicker than segment 4, segment 6 as long as and distinctly thicker than segment 5, segment 7 subtriangular, as long as wide, longer than segment 3, segments 8 to 10 subquadrate, segment 8 as wide as and shorter than segment 7, segment 9 distinctly larger than segment 8, segment 10 larger than segment 9, segment 11 oval, slightly longer than wide.

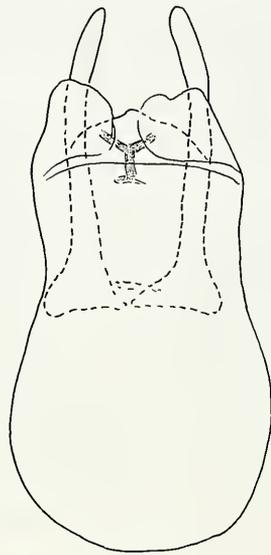
Pronotum not swollen dorsally, with central part of disc about in same plan as elytral base, disc gradually inclined and moderately narrowed anteriorly, lateral contours straight in basal half, rounded in anterior half, lateral margin carinae visible in dorsal view, anterior margin stria distinctly, very densely punctate, lateral margin striae with several, fairly coarse punctures, disc lacking microsculpture, antebasal puncture row not impressed and not interrupted in middle, bisinuate, punctures coarse, becoming laterally sparse, crossed in middle by short, median row of several coarse punctures, discal punctation fairly dense and fine, distinct at low magnification, most punctures much smaller than puncture intervals. Exposed part of scutellum flat, wider than long.

Elytra slightly narrowed basally and apically, with lateral contours weakly rounded, lateral margin carinae visible only near base in dorsal view, sutural striae deep, very finely punctate, adsutural areas roof-like, extremely finely punctate, basal puncture row consisting of coarse punctures extending on to humeral areas, apical margin serration absent. Discal punctation similar to that on pronotum, longitudinal puncture rows absent.

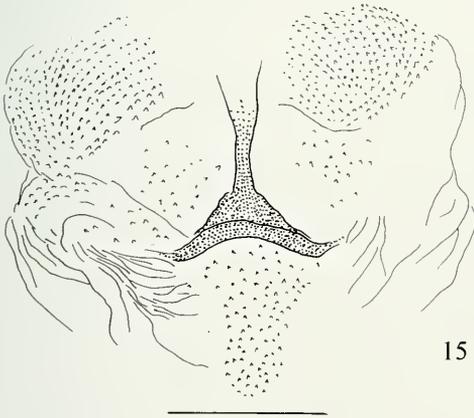
Prosternum with low median ridge, row of large punctures along anterior margin not interrupted in middle, microsculpture consisting of very short striae, waves and micropunctures, partly forming brick-wall pattern. Hypomera impunctate. Anterior part of hypomera with microsculpture forming brick-wall pattern or very short transverse striae, posterior part of hypomera with microsculpture consisting of elongate striae. Margin of mesosternal process arcuate. Mesosternal carinae oblique, curved



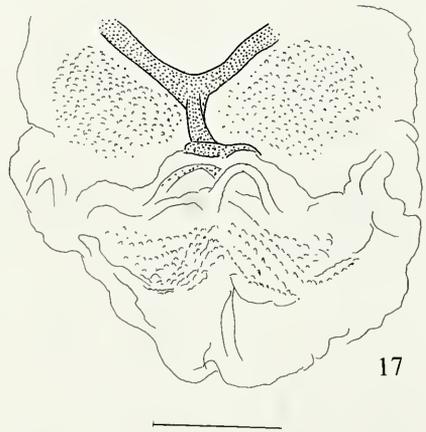
14



16



15



17

FIGS 14 to 17. 14 and 15, *Scaphidium negrito* Heller, aedeagus (14), scale bar = 0.2 mm, internal sac (15), scale bar = 0.1 mm; 16 and 17, *S. rufofemorale* sp. n., aedeagus (16), scale bar = 0.2 mm, internal sac (17), scale bar = 0.1 mm.

mesally on to median ridge. Mesosternal ridge wide, sulcate in mid-line, joined to oblique carinae. Mesepisterna distinctly microsculptured. Metasternum with meso-coxal lines shortened, ending far beyond mesosternum, coarsely punctate. Metasternal microsculpture punctulate and distinct on large median area, lateral parts of metasternum lacking microsculpture very finely punctate. Legs fairly short, tibiae carinate.

Abdominal tergites 7 and 8 and exposed sternites with even, very fine punctation. Abdominal microsculpture punctulate, and consisting of transverse and oblique striae on intercoxal process.

Male. Metasternum shallowly impressed medio-apically. Metasternal process strongly extended and bilobed. Metasternal setose patch restricted on to apical third of metasternum, consisting of recumbent, moderately long setae, and curled and fairly long apical setae. Profemora flattened and concave ventrally, bearing short pubescence. Protibiae lacking long erect setae, straight except in weakly arcuate basal part, with mesal side gradually thickened from base toward mid-length, evenly thick in apical half, with subapical carina on mesal side. Protarsi slightly widened, short, hardly longer than half of protibiae, ventral pubescence long, oblique. Mesotibiae slightly longer than protibiae, hardly curved, slightly thickened from base to middle third, beyond basal third evenly thick, with long, oblique setae on mesal side extended basally up to basal fifth. Mesotarsi slightly longer than two thirds of mesotibiae. Metatibiae slightly longer than mesotibiae, very weakly curved in apical half, contours of mesal side very weakly sinuate, mesal side with row of oblique setae extending from apex up to basal third. Metatarsi slightly longer than half of metatibiae. Aedeagus (Figs 14, 15) 0.95-1.0 mm long.

Distribution. Palawan.

Comments. This species is characterized by the elongate, weakly convex body and the pronotum with a median row of coarse punctures.

***Scaphidium* cf. *philippense* Reitter**

Figs 18-20

Scaphidium philippense Reitter, 1880: 39.

Scaphidium philippinense; Heller, 1917: 42 [misspelled]

Type material. From "Philippines" (MNHN), at present unavailable for study (see Note under Material).

Additional material examined. Luzon, Lagunas Prov., Mt. Makiling, 430m, 17-18.VI.1977, M. Satō, 1 ♂, 2 ♀ (MHNG); Lagunas Prov., Mt. Makiling, above Mad Springs, 400-700m, degrad. rainforest, 19-22.XI.1995, J. Kodada, 1 ♀ (MHNG); "Makiling" J. Sedlacek, 1 ♂ (MHNG); Luzon P. I. SE Bataan, July-Aug. 1945, Darlington, 1 ♂ (FMNH); "Manille" [=Manila], 1 ♀ (MHNG).

Description. Length 4.3-5.3 mm (TL), 3.6-4.1 mm (BL). Body comparatively convex. Head and body brown-black to black, antennomeres 1 to 6, abdomen, femora and tibiae lighter than body, dark brown to blackish, antennomeres 7 to 10 black, antennomere 11 black in basal half to two thirds, slightly lighter to light brown at apex, tarsi light brown or ochreous. Each elytron with large, light, ochreous or reddish, transverse basal and smaller, apical fascia. Margins of fasciae clearly delimited and almost regular. Basal fascia touching basal puncture row and lateral edges, not touching sutural striae, extended apically almost up to elytral mid-length. Apical fascia about half as long as basal fascia, reaching apical elytral edge, not touching sutural stria, with oblique anterior margin.

Head sparsely and very finely punctate between eyes, denser and less finely punctate in middle part of vertex. Narrowest interval between eyes 0.11-0.12 mm. Antennae with segment 4 slightly longer than segments 3 and 5, segment 5 thicker than segments 4 and 3, segment 6 subtriangular, widened apically, wider than segment 5, about as long as two thirds of segment 4; segment 7 subtriangular, slightly longer than

wide (without basal stalk), segment 8 about as wide as and distinctly shorter than segment 7, segments 9 and 10 larger than segment 8, segment 11 oval, longer than segment 10.

Pronotum weakly swollen dorsally, with central part of disc slightly above plan of elytral base, gradually inclined and fairly narrowed anteriorly, lateral contours weakly sinuate to almost oblique in basal halves, rounded in apical halves, lateral margin carinae exposed throughout in dorsal view, lateral margin striae with few fine punctures, anterior margin stria densely, finely punctate, disc lacking microsculpture, antebasal puncture row arcuate, not impressed, fairly coarse, dense, not becoming sparser laterally, not or very shortly interrupted in middle, median puncture row absent, discal punctation dense, fairly fine. Exposed part of scutellum flat, wider than long.

Elytra weekly narrowed basally and apically, with lateral contours almost straight in middle, weekly rounded in anterior and posterior thirds, lateral margin carinae entirely exposed in dorsal view, sutural striae deep, very finely punctate, adsutural areas flat anteriorly, elevated apically, very finely punctate, basal puncture row consisting of coarse punctures extending to humeral areas, apices finely serrate. Discal punctation sparse and very fine, much finer than pronotal punctation, longitudinal puncture rows absent.

Prosternum with punctulate microsculpture, lacking median ridge, punctures along anterior margin punctures coarse, except in middle. Hypomera lacking microsculpture, extremely finely punctate. Margin of mesosternal process between mesocoxae arcuate. Mesosternal carinae arcuate and gradually approximate toward median ridge. Mesosternal median ridge robust, fairly widely sulcate. Mesocoxal lines strongly shortened, with few, large punctures. Metasternum lacking microsculpture. Legs long, tibiae striate.

Abdomen with exposed tergites and ventrites extremely finely punctate, and with punctulate microsculpture.

Male. Metasternum hardly swollen medio-anteriorly, impressed in apical two thirds, with apical process weakly prominent, bilobed. Setose patch covering posterior third of metasternum, setae mostly short and recumbent, lateral setae long. Profemora curved, with ventral side flattened, concave, bearing dense, partly long pubescence. Protibiae straight, gradually thickened apically, widest shortly before apex (Fig. 18), with narrow subapical carina and short pubescence on mesal side. Protarsi about as long as half of protibiae, with segments 1 to 3 weekly widened, bearing tenent setae, segments 3 and 4 with long ventral setae. Mesotibiae slightly longer than protibiae, straight in basal third, slightly curved in apical two thirds, slightly thickened toward middle third, with dense, robust, mesal pubescence extended from apices about to basal third. Mesotarsi about as long as two thirds of mesotibiae. Metatibiae and metatarsi similar to mesotibiae and mesotarsi, but metatibiae not thickened apically. Aedeagus (Figs 19, 20) 1.15-1.20 mm long.

Distribution. Luzon.

Comments. Only two Philippine species possess characters that fit Reitter's original description. One of them has the basal elytral fasciae much larger the second species, and male sexual characters (see below) distinctive. The identification of the examined specimens is however tentative, mainly based on the female from "Manille"

that I have compared many years ago to a syntype of *S. philippense* preserved in MNHN. The material from Kingua identified as "*S. philippinense*" by Heller (1917) was not examined.

Scaphidium sp. near *philippense*

Figs 21-23

Material examined. Luzon, Lagunas Prov., Mt. Makiling, 430m, 17-18.VI.1977, M. Satô, 3 ♂, 5 ♀ (MHNG); Lagunas Prov., Mt. Makiling, above Mad Springs, 400-700m, degrad. rainforest, 19-22.XI.1995, J. Kodada, 1 ♂, 1 ♀ (MHNG); Lagunas Prov., Mt. Makiling, summit rd., 600m, 21-22.XI.1995, fungi on large logs, I. Löbl, 2 ♂, 1 ♀ (MHNG).

With the characters of cf. *S. philippense* but antennomere 11 entirely light, elytral basal light fascia of elytra much narrower, reaching middle third or slightly extended beyond basal third of elytral disc, about 1.5 times as long as apical fascia. Apical elytral fascia with concave anterior margin, and not reaching up to apical elytral margin. Pronotal and elytral punctation comparatively finer, mesosternal median ridge narrow, with very narrow sulcus. Median part of metasternum with punctulate microsculpture. Male protibiae weakly sinuate, widest in middle, not carinate (Fig. 21). Aedeagus (Figs 22, 23) with apical valves extended by protruding mesal lamellae.

Distribution. Luzon.

Comments. I prefer not to name this species until the identity of specimens described above as *S.* cf. *philippense* will be clearly established.

Scaphidium rufofemorale sp. n.

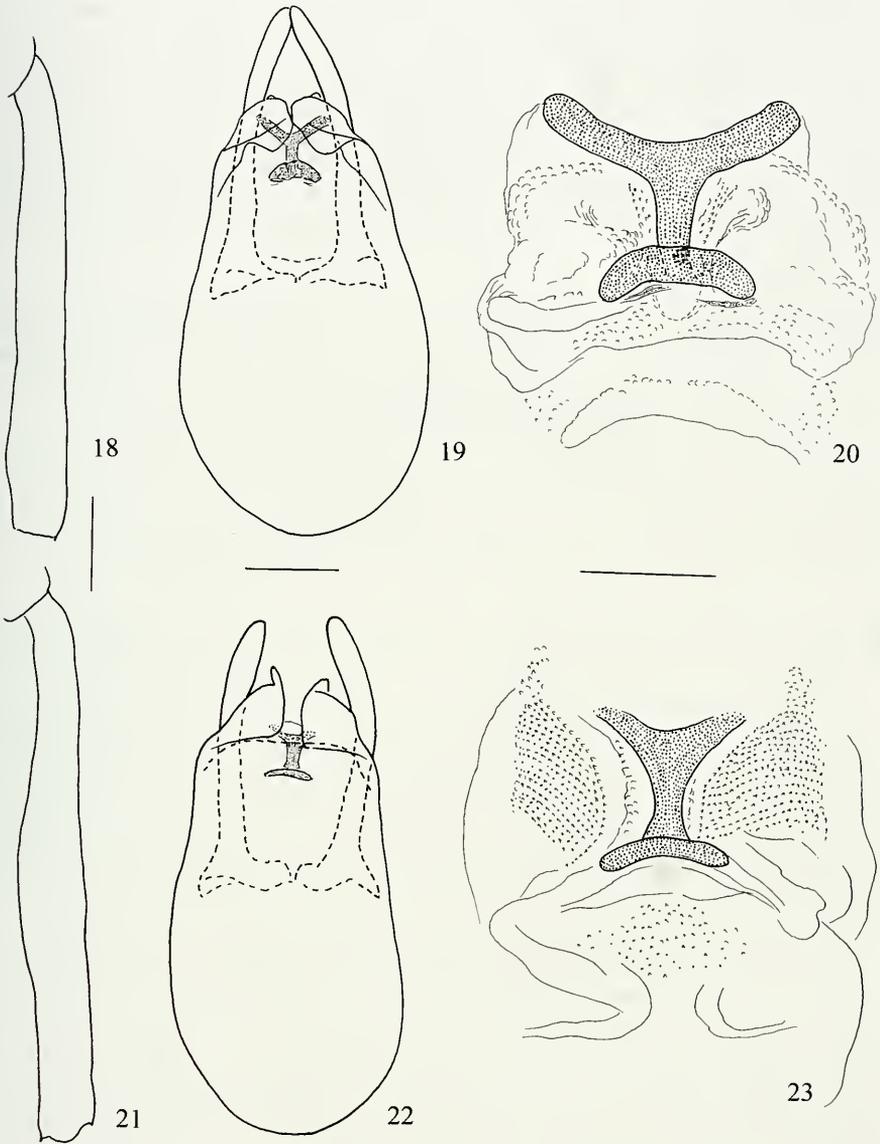
Figs 16-17

Holotype ♂: Luzon, Sagada 1550m, nr. Bontoc Mount Prov., 23.VII.1985, M. Sakai (MHNG).

Description. Length 4 mm (TL), 3.3 mm (BL). Very similar to *S. ilanum*, it may be distinguished by femora light reddish, antennal segment 5 and 6 equally long, shorter than segment 4, antennal club uniformly black, segment 10 larger than segment 9, pronotum with discal punctation comparatively coarse, much coarser than that in *S. ilanum*, lateral margin striae of pronotum with several coarser punctures, prosternum with median carina entire, throughout robust, mesosternal process wide and low, with median sulcus wide, gradually narrowed anteriorly.

Male. Metasternum impressed in medio-apical half. Metasternal process extending beyond line of metacoxae, gradually narrowed, with apical margin notched in middle. Setose patch covering apical third of median part of metasternum, consisting of recumbent setae becoming longer apically. Profemora as in *S. ilanum*, with ventral side widened, flattened and concave, bearing dense pubescence. Protibiae straight, lacking long, erect setae, becoming gradually thicker toward apex, with outer margin very weakly concave, inner margin weakly convex. Protarsi slightly shorter than half of protibiae, with tarsomeres 1 to 3 widened and bearing tenant setae, tarsomeres 3 and 4 with long ventral setae. Mesotibiae slightly longer than protibiae, about 1.6 times as long as mesotarsi, almost evenly thick and weakly arcuate, slightly narrowed toward base, with long, oblique mesal setae, extended from apex up to basal fifth. Metatibiae slightly longer than mesotibiae, almost 1.7 times as long as metatarsi, very weakly curved in apical half straight, slightly narrowed toward base. Aedeagus (Figs 16, 17) 1.1 mm long.

Distribution. Luzon.



FIGS 18 to 23. 18 to 20, *Scaphidium* cf. *philippense* Reitter, contours of male protibia (18), scale bar = 0.3, aedeagus (19), scale bar = 0.2 mm, internal sac (20), scale bar = 0.1 mm; *Scaphidium* sp. nr. *philippense*, contours of male protibia (21), aedeagus (22), scale bar = 0.2 mm, internal sac (23), scale bar = 0.1 mm.

Comments. This species may be readily distinguished from *S. ilanum* by the femoral coloration, coarser pronotal punctation, shape of male protibiae and larger male mesosternal process. The aedeagi in both species are almost identical.

Scaphidium seriatum Heller

Figs 24-26

Scaphidium seriatum Heller, 1917: 44.

Type material examined. Syntype ♂, with following original labels: "Mt. Makiling Luzon, Baker /1916 S/ seriatum typus. (red) / Staatl. Museum für Tierkunde, Dresden" (SMTD). It is here designated as lectotype and appropriately labelled.

Description. Length 3.7 mm (TL) and 2.7 mm (BL). Body convex, comparatively short. Head and body uniformly ochreous. Antennal segments 1 to 6 lighter than body, segment 7 black (following segments absent). Coxae, femora, and tibiae as body (tarsi absent).

Head with punctation very fine, at narrowest point between eyes 0.12 mm. Antennal segments 3 and 4 similar, weakly but distinctly widened apically, segment 4 slightly longer than segment 3, about 1.6 times as long as segment 2, segments 5 and 6 distinctly widened apically, segment 5 about as long as segment 2 and about 1.3 times as long as segment 6, segment 7 subtriangular, shorter than segment 3.

Pronotum swollen dorsally, in middle above plane of elytra, strongly inclined and narrowed anteriorly, lateral margins oblique, rounded near base, lateral margin carinae entirely exposed, lateral margin striae impunctate, anterior margin stria finely punctate, antebasal puncture row not impressed, interrupted in middle, dense, moderately coarse, extended close to lateral margins, forming broad-concave line, median puncture row absent. Disc lacking microsculpture, discal punctation even, fine, consisting of very shallow, not clearly delimited punctures, most punctures smaller than puncture intervals. Exposed part of scutellum flat, slightly wider than long.

Elytra distinctly narrowed basally and apically, with lateral contours evenly rounded, lateral margin carinae throughout visible in dorsal view, lateral margin striae indistinctly punctate, apical serration present, sutural striae deep, finely punctate, adsutural areas weakly roof-like, with extremely fine puncture rows. Basal punctures joined by striae, forming fairly sparse rows and consisting of punctures larger than those of pronotal antebasal row. Elytral disc very finely punctate, with two distinct, parallel, longitudinal puncture rows. Longitudinal puncture rows extended about to apical fifth of elytral disc, inner longitudinal row joined to basal puncture row.

Prosternum with median ridge, punctures along anterior margin large, not clearly delimited. Prosternal microsculpture absent. Hypomera lacking microsculpture, impunctate. Mesosternal process fused to metasternum, suture traceable near coxae. Mesosternal median ridge narrow, becoming gradually higher anteriorly, not sulcate, rounded in lateral view. Mesosternal carinae absent. Metasternum lacking microsculpture. Mesocoxal lines joined along mesosternal margin, with coarse marginal punctures posterior and laterally coxae. Legs long, tibiae carinate.

Exposed abdominal segments very finely punctate and bearing punctulate microsculpture.

Male. Metasternal process prominent, reaching almost up to line of posterior metacoxal margins, with posterior margin arcuate. Setose patch and coarsely punctate area covering entire apical two thirds of metasternum, with most setae recumbent, fairly short, marginal setae long. Middle of metasternum impressed. Profemora lacking obvious sexual characters. Protibiae weakly curved in basal third, almost straight in apical two thirds, throughout almost equally wide. Mesotibiae and metatibiae similar,

arcuate, evenly thick, with mesal sides lacking long, erect or oblique setae. Aedeagus (Figs 24-26) 0.98 mm long.

Distribution. Luzon.

Comments. This species differs from the remaining Philippine congeners by the mesosternum fused to metasternum and lacking carinae. It may be also easily distinguished by the elytra having discal puncture rows. The single available specimen is in poor state, its right antenna lacks, only seven segments of the left antenna remain, all tarsi are broken off, one protibia and the hind right leg are missing. It was carelessly dissected previous to the present study.

Scaphidium thomasi (Pic)

Figs 27-28

Scaphidiolum thomasi Pic, 1926: 3.

Scaphidium thomasi; Leschen & Löbl, 1995: 474.

Type material. From Luzon "St. Thomas" (MNHN), unavailable for present study.

Additional material examined: Luzon, Mountain Prov., Mt. Data 2250m, 14.vii.1985, M. Satô, 1 ♂, 1 ♀ (MHNG); Luzon, Mountain Prov., Mt. Data 7500ft, mossy forest table summit, H. Hoogstraal & D. Heyneman, 1 ♂ (FMNH); Luzon, Mountain Prov., Mt. Data lodge, 2200-2300m, 23-24.xii.1979, #154, L. Deharveng & J. Orousset, 1 ♂ (MHNG); Luzon, Mountain Prov., N & NE of Sagada, 15-19.xii.1979, # 143, L. Deharveng & J. Orousset, 1 ♂ (MHNG); Luzon, Benguet Prov., Mt. Mungeoto 2450m, 27.v.1977, M. Satô, 1 ♀ (MHNG); Luzon, Bontoc Prov., Palopal 2300m, 30.v.1977, M. Satô, 1 ♂, 1 ♀ (MHNG).

Description. Length 3.8-4.8 (TL) and 3.5-3.7 (BL) mm. Body comparatively elongate, moderately convex. Head black or very dark brown. Antennomeres 1 to 6 dark brown, 7 to 10 blackish or black, 11 dark reddish to ochreous. Pronotum black between basal margin and antebasal puncture row, and with black median fascia becoming wider anteriorly to extend up to anterior lateral angles. Large lateral areas of pronotum and entire prohypomera reddish. Scutellum black. Elytra reddish or ochreous, with narrowly black basal edge and fairly large black humeral spot, black or very dark brown adsutural areas, and large, transverse, black fascia. Latter with oblique anterior margin, reaching about anterior fourth of sutural length at sutural striae and hardly reaching mid-length at lateral pronotal edges. Posterior margin of transverse fascia strongly sinuate, separated from apical margin by about half of fascia width near sutural striae and by more than fascia width near lateral elytral edges. Ventral side of thorax and abdomen, abdominal apex excepted, black, femora and tibiae blackish, tarsi dark brown.

Head punctuation regularly fine, or more distinct beyond eyes than in middle of frons. Narrowest interval between eyes 0.16-0.18 mm. Antennal segments 3 and 4 subequal, segment 5 slightly shorter and hardly thicker than segment 4, segment 6 shorter than and about as thick as segment 5, segments 7 and 8 subcylindrical, segment 7 about as long as segment 3, longer than wide and longer than segment 8, segments 9 and 10 similar in size, larger than segment 8, segment 11 oval, distinctly longer than segment 10.

Pronotum not swollen dorsally, with central part of disc about in same plan as elytral base, disc gradually inclined and moderately narrowed anteriorly, lateral contours sinuate, lateral margin carinae visible in dorsal view, anterior margin and lateral margins striae impunctate, disc lacking microsculpture, antebasal puncture row not impressed and not interrupted in middle, bisinuate, punctures coarse, almost evenly

dense, median puncture row absent, discal punctation fairly dense and fine on middle, very fine on reddish lateral areas. Exposed part of scutellum flat, about as long as wide.

Elytra moderately narrowed basally and apically, with lateral contours rounded, lateral margin carinae distinct near base in dorsal view, hardly visible near apex, sutural striae deep, very finely punctate, adsutural areas flat anteriorly, roof-like elevated apically, extremely finely punctate, basal puncture row consisting of coarse punctures reaching humeral areas, apical margin serration present. Discal punctation very fine, hardly visible, longitudinal puncture rows absent.

Prosternum lacking median ridge, row of anterior margin punctures widely interrupted in middle, microsculpture present only near anterior margin and consisting of short striae. Hypomera lacking microsculpture and extremely finely punctate. Margin of mesosternal process arcuate. Mesosternal carinae oblique, curved mesally on to median ridge. Mesosternal ridge narrow, very shortly sulcate basally, joined to oblique carinae. Mesepisterna with hardly visible punctulate microsculpture. Metasternum with mesocoxal lines shortened, ending far beyond mesosternum, coarsely punctate. Metasternal microsculpture absent. Legs fairly long. Tibiae carinate.

Abdominal tergites 7 and 8 and exposed sternites with even, very fine punctation. Abdominal microsculpture punctulate.

Male. Metasternum with shallowly impressed median part beyond line of mesocoxae. Metasternal process strongly extended, with minute notch in middle of apical margin. Metasternal setose patch restricted on to apical third of metasternum, consisting of recumbent, moderately long setae, and curled and fairly long lateral setae. Profemora flattened and concave ventrally, bearing dense, partly erect pubescence. Protibiae lacking long erect setae, with weakly sinuate dorsal edge, strongly sinuate ventral edge, widest in middle part, strongly narrowed basally, weakly narrowed subapically, at apex again widened. Protarsi slightly widened, as long as half of protibiae, ventral pubescence long, oblique. Mesotibiae slightly longer than protibiae, hardly curved, slightly thickened at apex, with long, oblique setae on mesal side extended up to basal fifth. Mesotarsi about as long as two thirds of mesotibiae. Metatibiae slightly longer than mesotibiae, straight, slightly thickened at apex, mesal side with row of oblique setae extending from apex up to basal fourth. Metatarsi slightly longer than half of metatibiae. Aedeagus (Figs 27, 28) 1.25-1.35 mm long.

Distribution. Luzon.

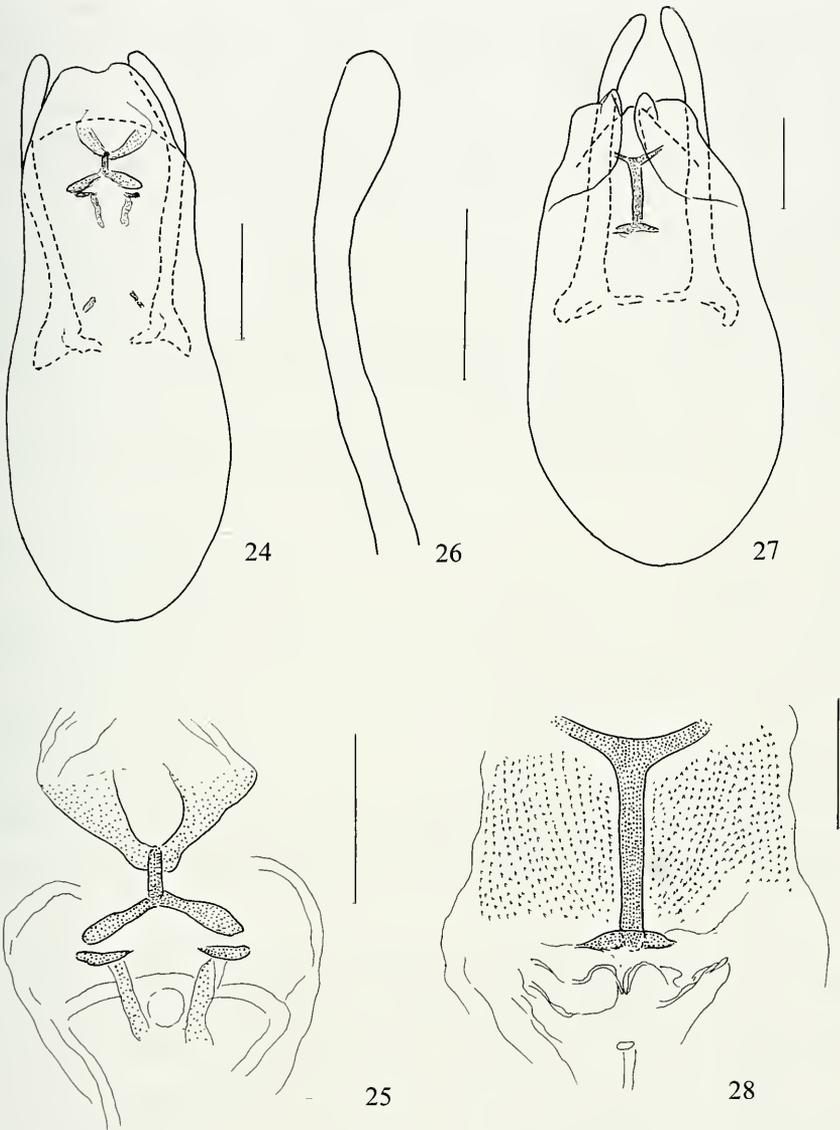
Comments. Among the examined material only one species fits the original Pic's description "...niger, ...thorace laterifer et triangularites rufo ornato, ... elytris nigris, antice late rufo maculatis, apice rufo undulato-fasciatis, ...". This species is similar to *S. philippense*, but may be readily distinguished from the latter by the pronotal colour pattern and by the shape of the male protibiae. It is possibly restricted to high elevation habitats.

Scaphidium tuberculipes (Löbl, 1972)

Scaphidiolum tuberculipes Löbl, 1972: 79.

Scaphidium tuberculipes: Leschen & Löbl, 1995.

Type material examined. Holotype ♂ labelled "Philippinen Buccas Socorro X. 1916 G. Böttcher" (ZMB); paratype ♂ labelled "Siargao Dapa 30.9.16 G. Böttcher" (MHNG).



FIGS 24 to 28. 24 to 26, *Scaphidium seriatum* Heller, aedeagus (24), scale bar = 0.2 mm, internal sac (25), scale bar = 0.1 mm, paramere (26), scale bar = 0.3 mm; 27 and 28, *S. thomasi* (Pic), aedeagus (27), scale bar = 0.2 mm, internal sac (28), scale bar = 0.1 mm.

Additional material examined. "Mindanao Agin L., J. Sedláček" 1 ♂ (MHNG); "Sorocco 12.Okt.1916 Böttcher" 1 ♀ (ZMB).

Description. Length 3.5-4.4 mm (TL) and 2.6-3.5 mm (BL). Body fairly convex. Head, most of pronotum, and most of elytra reddish-brown. Pronotum with black median fascia reaching basal and apical margins, weakly widened anteriorly,

strongly widened basally. Hypomera reddish, except along black ventral margins. Elytra with black adsutural areas, base, lateral edges, supra-epipleura and epipleura. Black lateral area extended posterior elytral mid-length to form a small spot. Ventral side of body black. Antennal segments 1 to 6 yellowish to light brown, segment 7 to 10 black, segment 11 uniformly very dark, brown to brown-black, or very dark medio-basally and becoming lighter laterally and apically. Femora black or almost black, protibiae dark reddish-brown, mesotibiae and metatibiae about as dark as femora, tarsi dark reddish-brown.

Head at narrowest point between eyes 0.11-0.12 mm, with punctation irregular, very fine. Antennal segment 3 about 1.3 times as long as segment 4, both weakly but distinctly widened apically, segment 5 about as thick as and distinctly shorter than segment 4, about as long as segment 2, segment 6 swollen apically but not subtriangular, about as long as three fourth of segment 5; segment 7 subtriangular, slightly longer than wide, about as long as segment 4.

Pronotum lacking microsculpture, weakly swollen dorsally, in middle above plane of elytra, strongly inclined and narrowed anteriorly, lateral margins oblique, not or very weakly emarginate near base, lateral margin carinae entirely exposed, lateral and anterior margin striae impunctate, antebasal puncture row impressed, broadly interrupted in middle, arcuate, approximate to lateral margins, consisting of small and shallow punctures. Discal punctation very fine, very shallow, punctures not clearly delimited, much smaller than puncture intervals. Median puncture row absent. Exposed part of scutellum flat, wider than long.

Elytra distinctly narrowed basally and apically, with lateral contours evenly rounded, lateral margin carinae throughout visible in dorsal view, lateral margin striae indistinctly punctate, apical serration present, sutural striae deep, finely punctate, adsutural areas roof-like elevated, extremely finely punctate, basal puncture rows dense, consisting of punctures larger than punctures forming pronotal antebasal row. Punctation on basal half of elytral disc very fine, similar to that on pronotal disc, punctation on apical half of elytra distinct, consisting of punctures much larger than those on basal half.

Prosternum lacking microsculpture and lacking median ridge, in median area slightly swollen, puncture row along anterior margin interrupted in middle, consisting of large, not clearly delimited punctures. Hypomera impunctate und lacking microsculpture. Margin of mesosternal process transverse. Mesosternal carinae transverse laterally, curved mesally to join on to median ridge. Mesosternal median ridge low, rounded, not clearly delimited, not sulcate, gradually narrowed anteriorly. Metasternum lacking microsculpture, very finely punctate. Mesocoxal lines joined in middle, coarsely punctate beyond and laterally coxae. Legs long, tibiae carinate.

Exposed abdominal segments with uniformly fine, punctulate microsculpture and with punctation very fine and sparse, similar to that on metasternal sides.

Male. Metasternum with entire median part impressed, impression shallow and sharply delimited anteriorly, deep and not clearly delimited in apical two thirds. Setose patch extended almost up to anterior third of metasternum, setae long, in particular apically and laterally, punctation coarse. Apical process strongly prominent, with margin arcuate, weakly notched in middle. Ventral sides of profemora slightly concave, not

flattened, with two rows of small tubercles. Protibiae straight, gradually, very weakly thickened from base toward apical fourth, from widest point somewhat narrowed toward apex, finely tuberculate on mesal side. Protarsi about as long as half of protibiae, with segments 1 to 3 distinctly widened and bearing tenant setae, segments 1 to 5 bearing long ventral setae. Mesotibiae and metatibiae lacking long setae on mesal side. Mesotibiae narrow, gradually, weakly thickened apically, straight in basal halves, arcuate in apical halves, about 1.5 times as long as protibiae. Mesotarsi long, about as long as three fourth of mesotibiae, bearing long, erect ventral setae. Metatibiae almost evenly narrow, straight in basal halves, weakly curved in apical halves, distinctly shorter than mesotibiae. Metatarsi about as long as two thirds of metatibiae. Aedeagus 1.0-1.17 mm long.

Distribution. Mindanao, Bucas Grande and Siargao Islands.

Comments. This species may be easily distinguished from the Philippine congeners by its colour pattern and the tuberculate protibiae and profemora. The tibial tubercles are variable in size and may be very small and uneasily seen in dry specimens.

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REFERENCES

- ACHARD, J. 1924. Nouvelles espèces de *Scaphidiolum* de la faune indomalaise (Col. Scaphidiidae). *Bulletin de la Société entomologique de France* 1924: 150-153.
- HELLER, K. M. 1917. Scaphidiidae von den Philippinen. *Wiener entomologische Zeitung* 36: 41-50.
- LESCHEN, R. A. B. & LÖBL, I. 1995. Phylogeny of Scaphidiinae with redefinition of tribal and generic limits (Coleoptera: Staphylinidae). *Revue suisse de Zoologie* 102: 425-474.
- LÖBL, I. 1972. Beitrag zur Kenntnis der Scaphidiidae (Coleoptera) von den Philippinen. *Mitteilungen der Schweizerischen entomologischen Gesellschaft* 45: 79-109.
- LÖBL, I. 1997. Catalogue of the Scaphidiinae (Coleoptera: Staphylinidae). *Instrumenta biodiversitatis* 1: xii + 190 pp.
- PIC, M. 1916. Diagnoses spécifiques. *Mélanges exotico-entomologiques* 17: 8-20.
- PIC, M. 1926. Nouveautés diverses. *Mélanges exotico-entomologiques* 44: 1-32.
- REITTER, E. 1880. Die Gattungen und Arten der Coleopteren-Familie: Scaphidiidae meiner Sammlung. *Verhandlungen des naturforschenden Vereins in Brünn* 18[1879]: 35-49.